What is claimed is:

1. An Event Report Request data for requesting to deliver an Event Report data, wherein the Event Report data reports an Event occurred in accordance with use of a digital item, the Event Report Request data comprising Delivery Time information describing time for transmitting the Event Report data,
wherein the Delivery Time information includes:
a specific time;
an elapsed time; and
a periodic time.

2. The Event Report Request data as recited in claim 1, wherein the specific time includes information requesting to transmit the Event Report data at least one of on a first time, after the first time, before a second time and between the first time and the second time.

3. The Event Report Request data as recited in claim 2, wherein the elapsed time includes information requesting to transmit the Event Report data at least one of after on, before after a third time, before a fourth time and between the third time and the fourth time.

4. The Event Report Request data as recited in claim 1, further comprising Time information describing time on which the Event occurs,
wherein the Time information includes:
a specific time;
an elapsed time; and
a periodic time.

5. The Event Report Request data as recited in claim 4, wherein the specific time includes information on which

the Event occurs at least one of on a first time, after the first time, before a second time and between the first time and the second time.

6.   The Event Report Request data as recited in claim 2, wherein the elapsed time includes information on which the Event occurs at least one of after on, before after a third time, before a fourth time and between the third time and the fourth time.

7.   The Event Report Request data as recited in claim 1, further comprising To Whom information,
        wherein the To Whom information includes:
        a mandatory recipient to whom the Event Report data is transmitted in mandatory; and
        an optional recipient to whom the Event Report data is transmitted in optional.

8.   The Event Report Request data as recited in claim 7, further comprising:
        Condition Descriptor describing conditions for the delivery of the Event Report data, i.e., Event condition related to operation for a digital item and Event occurrence time; and
        ERR Descriptor describing identification and characteristics of the Event Report Request data.

9.   The Event Report Request data as recited in claim 8, wherein the Condition Descriptor includes:
        Time information describing the Event occurrence time;
        DI Related Operation describing user operation condition in accordance with the use of the digital item; and
        Peer Related Operation describing condition in

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accordance with the operations occurred in the peer.

10. The Event Report Request data as recited in claim
9, wherein the ERR Descriptor includes:

5   ID describing identification (ID) of the EVENT REPORT
REQUEST data;
          Description of the EVENT REPORT REQUEST data
describing attributes of the EVENT REPORT REQUEST data; and
          Access Right describing an access right of the Event
10   Report Request data.

11. The Event Report Request data as recited in claim
10, wherein the Description includes:
          Time Stamp describing a time on which the EVENT
15   REPORT REQUEST data is generated;
          Life Time describing a life time of the EVENT REPORT
REQUEST data;
          History describing a history of changes or
modification of the EVENT REPORT REQUEST data; and
20   Priority Level describing the priority level of the
EVENT REPORT REQUEST data, wherein the priority level is
used by peers to handle Event Report Request data.

12. The Event Report Request data as recited in claim
25   11, further comprising:
          ER Descriptor describing contents and formats of the
Event Report data corresponding to the Event condition;
          Delivery Descriptor describing generation and
transmission schemes of the Event Report data; and
30   To Whom describing a recipient of the Event Report
data.

13. The Event Report Request data as recited in claim
12, wherein the ER Descriptor includes:
35   ER Data Descriptor describing a report data list and

format of the Event Report data, wherein the report data list is a list of information to be included in the Event Report data; and

ERR describing another Event Report Request data
5 requesting an operation, e.g., an acknowledgement or forwarding of the Event Report Request data.

14. The Event Report Request data as recited in claim 13, wherein the ER Data Descriptor includes:
10   ER ID describing identification of the Event Report data; and

Report Data describing a list of information which the Event Report data reports.

15   15. The Event Report Request data as recited in claim 14, wherein the To Whom includes:

Peer IDs, which is identification information of the peers receiving the Event Report data; and

User IDs, which is identification information of the
20 users receiving the Event Report data.

16. The Event Report Request data as recited in claim 15, wherein the Delivery Descriptor includes:

Format describing a format of data used for
25 generating the Event Report data;

Access Right describing access right to the Event Report data;

Encryption describing an encryption algorithm for encrypting the Event Report data;
30   Authentication describing an authentication algorithm for authenticating the Event Report data;

Delivery Time describing time to delivery the Event Report data;

Protocol describing a protocol for delivering the
35 Event Report data; and

Compression describing a compression algorithm for compressing the Event Report data.

17. The Event Report Request data as recited in claim 16, wherein Report Data includes:
        Peer Data describing information on the peer; and
        User Data describing information on the user.

17. The Event Report Request data as recited in claim 7, further comprising:
        ER Descriptor describing contents and formats of the Event Report data corresponding to the Event condition; and
        Delivery Descriptor describing generation and transmission schemes of the Event Report data

19. The Event Report Request data as recited in claim 16, wherein the ER Descriptor includes:
        ER Data Descriptor describing a report data list and format of the Event Report data, wherein the report data list is a list of information to be included in the Event Report data; and
        ERR describing another Event Report Request data requesting an operation, e.g., an acknowledgement or forwarding of the Event Report Request data.

20. The Event Report Request data as recited in claim 19, wherein the ER Data Descriptor includes:
        ER ID describing identification of an Event Report data;
        Access right describing access right to the Event Report data;
        Report Data describing list of information which the Event Report data reports; and
        Format describing a format of data used for generating the Event Report data.

21. The Event Report Request data as recited in claim 20, wherein the Delivery Descriptor includes:

To Whom describing a recipient of the Event Report data;

Delivery time describing time to delivery the Event Report data; and

How describing a transmission method of the Event Report data.

22. The Event Report Request data as recited in claim 20, wherein the To Whom includes:

Peer IDs, which is identification information of the peers receiving the Event Report data; and

User IDs, which is identification information of the users receiving the Event Report data.

23. The Event Report Request data as recited in claim 22, wherein the How includes:

Compression describing a compression algorithm for compressing the Event Report data;

Encryption describing an encryption algorithm for encrypting the Event Report data;

Authentication describing an authentication algorithm for authenticating the Event Report data; and

Protocol describing a protocol for delivering the Event Report data.

24. The Event Report Request data as recited in claim 23, wherein the ERR includes or refers another Event Report Request data requesting an acknowledgement or forwarding of the Event Report data.

25. The Event Report Request data as recited in claim 24, wherein the DI Related Operation uses terms of right

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data dictionary (RDD) defined in MPEG-21.

26. The Event Report Request data as recited in claim
25, wherein the Peer Related Operation uses terms of the
5   Peer Environment of a digital item adaptation (DIA) defined
in the MPEG-21.   .

27. The Event Report Request data as recited in claim
26, wherein the ID of the ERR Descriptor has the same
10   format as a digital item identification (DII) defined in
the MPEG-21.

28. The Event Report Request data as recited in claim
1 or 6, wherein based on schema of eXtensible Markup
15   Language (XML), syntax of the Delivery time information is
defined as:

(Table 1)
```
<xsd:complexType name="DeliveryTime">
        <xsd:choice minOccurs="0">
                <xsd:element name="specificTime"
type="SpecificTime"/>
                <xsd:element name="elapsedTime"
type="ElapsedTime"/>
                <xsd:element name="periodicTime"
type="PeriodicTime"/>
        </xsd:choice>
</xsd:complexType>
<xsd:complexType name="SpecificTime">
        <xsd:choice>
                <xsd:element name="onTime"
type="xsd:dateTime"/>
                <xsd:sequence>
                        <xsd:element name="afterOn"
type="xsd:dateTime" minOccurs="0"/>
```

```
                                <xsd:element name="beforeOn"
        type="xsd:dateTime" minOccurs="0"/>
                        </xsd:sequence>
                </xsd:choice>
5               </xsd:complexType>
                <xsd:complexType name="ElapsedTime">
                        <xsd:sequence>
                                <xsd:element name="beginElapse"
        type="BeginElapse" minOccurs="0"/>
10                              <xsd:element name="endElapse"
        type="EndElapse" minOccurs="0"/>
                        </xsd:sequence>
                </xsd:complexType>
                <xsd:complexType name="BeginElapse">
15                      <xsd:choice>
                                <xsd:element name="sTime"
        type="xsd:time"/>
                                <xsd:element name="sDuration"
        type="xsd:duration"/>
20                      </xsd:choice>
                </xsd:complexType>
                <xsd:complexType name="EndElapse">
                        <xsd:choice>
                                <xsd:element name="eTime"
25      type="xsd:time"/>                                     .
                                <xsd:element name="eDuration"
        type="xsd:duration"/>
                        </xsd:choice>
                </xsd:complexType>
30              <xsd:complexType name="PeriodicTime">
                        <xsd:sequence>
                                <xsd:element name="start"
        type="xsd:dateTime" minOccurs="0"/>
                                <xsd:element name="period"
35      type="xsd:duration"/>
```

```
                <xsd:element name="phase"
    type="xsd:duration" minOccurs="0"/>
                    <xsd:element name="duration"
    type="xsd:duration"/>
5                    <xsd:element name="periodCount"
    type="xsd:duration"/>
            </xsd:sequence>
        </xsd:complexType>


10        <xsd:element name="deliveryTime"
    type="DeliveryTime"/>
```

(Table 2)

Name	Definition
"DeliveryTime"	Delivery Time Information
"SpecificTime"	Specific time to transmit ER data
"ElapsedTime"	Elapsed time to transmit ER data
"PeriodicTime"	Periodic Time to transmit ER data
"onTime"	Time at which ER data should be transmitted
"afterOn"	After a time at which ER data should be transmitted
"beforeOn"	Before a time at which ER data should be transmitted
"beginElapse"	Reference time when elapsed time for transmitting the ER data begins. If there is no beginElapse, the reference time is Event occurrence time
"endElapse"	End time of elapsed time by which delivery of the Event Report data is ended
"sTime"	Specific time of a day on which an Event occurs, the specific time at which delivery of an Event Report data

	for the Event starts
"sDuration"	Duration after specific time of a day on which an Event occurs, the specific time at which delivery of an Event Report data for the Event starts
"eTime"	Specific time of a day on which an Event occurs, the specific time at which delivery of an Event Report data for the Event ends
"endDuration"	Duration after specific time of a day on which an Event occurs, the specific time at which delivery of an Event Report data for the Event ends

29. The Event Report Request data as recited in claim 7, wherein based on schema of eXtensible Markup Language (XML), syntax of the To Whom information is defined as:

5

(Table 3)

```
<xsd:complexType name="Recipient">
        <xsd:sequence minOccurs="1"
maxOccurs="unbounded">
                <xsd:element name="peer"
type="xsd:string"/>
                <xsd:element name="reportPolicy">
                    <xsd:simpleType>
                        <xsd:restriction
base="xsd:NMTOKEN">
                            <xsd:pattern
value="required"/>
                            <xsd:pattern
value="optional"/>
                        </xsd:restriction>
                    </xsd:simpleType>
                </xsd:element>
```

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```
            </xsd:sequence>
         </xsd:complexType>
         <xsd:element name="recipient" type="Recipient"/>
```

5   (Table 4)

Name	Definition
"Recipient"	Recipient
"peer"	Peer generating Event Report
"reportPolicy"	Event Report policy. If the value is "required", the peer should transmit the ER data, and if the value is "optional", the Event Report Request message is denied and the ER data can not be transmitted.

     30. The Event Report Request data as recited in claim 1, wherein the Event Report Request data includes information as:

10

General Element	Specific Element		
Condition Descriptor	Time		
	Event	DI Related Operation	
		Peer Related Operation	
ERR Descriptor	Description	Time Stamp	
		Life Time	
		History	
		Priority Level	
	ID		
	Access Right		
ER Descriptor	ER Data Descriptor	ER ID	
		Report Data	Peer Data
			User Data
	ERR		
Delivery	Format		

Descriptor	Encryption	
	Access Right	
	Authentication	
	Delivery Time	
	Protocol	
	Compression	
To Whom	Peer IDs	
	User IDs	

31. The Event Report Request data as recited in claim 1, wherein the Event Report Request data includes information as:

General Element	Specific Element		
Condition Descriptor	Time		
	DI Related Operation		
	Peer Related Operation		
ERR Descriptor	Description	Time Stamp	
		Life Time	
		History	
		Priority Level	
	ID		
	Access Right		
ER Descriptor	ER Data Descriptor	ER ID	
		Report Data	
		Access Right	
		Format	
	ERR		
Delivery Descriptor	To Whom	Peer IDs	
		User IDs	
	Delivery Time		
	How	Encryption	
		Authentication	

| | | Protocol |
| | | Compression |

32. An Event Report data for reporting an Event occurred in accordance with use of a digital item, wherein the Event Report data provides information specified in an Event Report Request data, the Event Report data comprising:

ER Descriptor describing contents and formats of the Event Report data; and

Source Descriptor describing information on a source generating the Event Report data.

33. The Event Report data as recited in claim 32, further comprising:

ER Report data describing reportable information corresponding to items requested by the Event Report Request data.

34. The Event Report data as recited in claim 33, further comprising:

Additional Action Descriptor describing additional actions related to generation, transmission and reception of the Event Report data corresponding to the Event Report Request data.

35. The Event Report data as recited in claim 34, wherein the ER Descriptor includes:

identification (ID) of the Event Report data; and

description information describing attributes of the Event Report data.

36. The Event Report data as recited in claim 35, wherein the Source Descriptor includes:

ER Peer ID describing identification (ID) of the peer
who generates the Event Report data at the first; and
Original ERR describing information on the Event
Report Request data requesting to generate the Event Report
5   data.

36. The Event Report data as recited in claim 35,
wherein the Additional Action Descriptor includes:
ERR describing another Event Report Request data
10 requesting an operation, e.g., an acknowledgement,
forwarding or merging of the Event Report data; and
ER describing another Event Report data to be linked
to the Event Report data.

15   38. The Event Report data as recited in claim 37,
wherein the description information includes:
Format describing a format of data used for
generating the Event Report data;
Encryption describing an encryption algorithm for
20 encrypting the Event Report data;
Compression describing a compression algorithm for
compressing the Event Report data;
Access Right describing an access right of the Event
Report data;
25   Authentication describing an authentication algorithm
for authenticating the Event Report data;
History describing a history of changes or
modification of the Event Report data;
Priority Level describing the priority level to the
30 Event Report data, wherein the priority level is used by
the recipient to handle Event Report data; and
Time Stamp describing a time on which the Event
Report data is generated.

35   39. The Event Report data as recited in claim 37,

wherein the Event Report Report Data embeds or refers reportable information specified in the Event Report Request data.

40. The Event Report data as recited in claim 39, wherein the Original ERR embeds or refers the Event Report Request data requesting to generate the Event Report data.

41. The Event Report data as recited in claim 40, wherein the ERR embeds or refers another Event Report Request data related to the Event Report data.

42. The Event Report data as recited in claim 41, wherein the ER embeds or refers another Event Report data related to the Event Report data.

43. The Event Report data as recited in claim 42, wherein the ER Descriptor further includes ER Status information describing status of the Event Report data.

44. The Event Report data as recited in claim 32, wherein the Event Report data includes information as:

General Element	Specific Element
ER Descriptor	ID
	Format
	Encryption
	Access Right
	Authenticate
	Compression
	History
	Priority Level
	Time Stamp
Source Descriptor	ER Peer ID
	Original ERR

ER Report Data		
Additional Action Descriptor	ERR	
	ER	

45. An Event Reporting system for processing an Event Report data in order to report an Event occurred in accordance with use of a digital item, the Event Report system comprising:

Event Report Request processing means for generating and delivering an Event Report Request data requesting to report an Event in response to user's request; and

Event Report processing means for generating and delivering an Event Report data reporting the Event specified in the Event Report Request data.

46. The Event Reporting system as recited in claim 45, wherein said Event Report Request processing means includes:

Event Report Request generation means for generating the Event Report Request data;

Event Report Request transmission means for transmitting the Event Report Request data;

Event Report Request receiving means for receiving an Event Report Request data;

Event Report Request analysis means for the Event Report Request data received in the Event Report Request receiving means; and

Event occurrence monitoring means for monitoring whether or not an Event occurs.

47. The Event Reporting system as recited in claim 46, wherein said Event Report processing means includes:

Event Report generation means for generating the Event Report data;

Event Report transmission means for transmitting the

Event Report data;

Event Report receiving means for receiving an Event Report data; and

Event Report Request analysis means for the Event
5   Report data received in the Event Report receiving means.

48. The Event Reporting system as recited in claim 47, wherein the Event Report Request data includes Delivery Time information describing time for delivering the Event
10   Report data,

wherein the Delivery Time information includes:

a specific time;

an elapsed time; and

a periodic time.

15

49. The Event Reporting system as recited in claim 48, wherein the specific time includes information requesting to transmit the Event Report data at least one of on a first time, after the first time, before a second time and
20   between the first time and the second time.

50. The Event Reporting system as recited in claim 49, wherein the elapsed time includes information requesting to transmit the Event Report data at least one of after on,
25   before after a third time, before a fourth time and between the third time and the fourth time.

51. The Event Reporting system as recited in claim 50, further comprising Time information describing time on
30   which the Event occurs,

wherein the Time information includes:

a specific time;

an elapsed time; and

a periodic time.

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52. The Event Reporting system as recited in claim 51, wherein the specific time includes information on which the Event occurs at least one of on a first time, after the first time, before a second time and between the first time

5   and the second time.

53. The Event Reporting system as recited in claim 52, wherein the elapsed time includes information on which the Event occurs at least one of after on, before after a third

10 time, before a fourth time and between the third time and the fourth time.

54. The Event Reporting system as recited in claim 53, further comprising To Whom information,

15   wherein the To Whom information includes:
    a mandatory recipient to whom the Event Report data is transmitted in mandatory; and
    an optional recipient to whom the Event Report data is transmitted in optional.

20

55. The Event Reporting system as recited in claim 54, wherein based on schema of eXtensible Markup Language (XML), syntax of the Delivery time information is defined as:

25   (Table 1)
        <xsd:complexType name="DeliveryTime">
            <xsd:choice minOccurs="0">
                <xsd:element name="specificTime"
    type="SpecificTime"/>
30   <xsd:element name="elapsedTime"
    type="ElapsedTime"/>
                    <xsd:element name="periodicTime"
    type="PeriodicTime"/>
            </xsd:choice>
35   </xsd:complexType>

```
        <xsd:complexType name="SpecificTime">
            <xsd:choice>
                <xsd:element name="onTime"
    type="xsd:dateTime"/>
                <xsd:sequence>
                    <xsd:element name="afterOn"
    type="xsd:dateTime" minOccurs="0"/>
                    <xsd:element name="beforeOn"
    type="xsd:dateTime" minOccurs="0"/>
                </xsd:sequence>
            </xsd:choice>
        </xsd:complexType>
        <xsd:complexType name="ElapsedTime">
            <xsd:sequence>
                <xsd:element name="beginElapse"
    type="BeginElapse" minOccurs="0"/>
                <xsd:element name="endElapse"
    type="EndElapse" minOccurs="0"/>
            </xsd:sequence>
        </xsd:complexType>
        <xsd:complexType name="BeginElapse">
            <xsd:choice>
                <xsd:element name="sTime"
    type="xsd:time"/>
                <xsd:element name="sDuration"
    type="xsd:duration"/>
            </xsd:choice>
        </xsd:complexType>
        <xsd:complexType name="EndElapse">
            <xsd:choice>
                <xsd:element name="eTime"
    type="xsd:time"/>
                <xsd:element name="eDuration"
    type="xsd:duration"/>
            </xsd:choice>
```

```
            </xsd:complexType>
            <xsd:complexType name="PeriodicTime">
                <xsd:sequence>
                    <xsd:element name="start"
5    type="xsd:dateTime" minOccurs="0"/>
                    <xsd:element name="period"
     type="xsd:duration"/>
                    <xsd:element name="phase"
     type="xsd:duration" minOccurs="0"/>
10                   <xsd:element name="duration"
     type="xsd:duration"/>
                    <xsd:element name="periodCount"
     type="xsd:duration"/>
                </xsd:sequence>
15          </xsd:complexType>


            <xsd:element name="deliveryTime"
     type="DeliveryTime"/>


20          (Table 2)
```

Name	Definition
"DeliveryTime"	Delivery Time Information
"SpecificTime"	Specific time to transmit ER data
"ElapsedTime"	Elapsed time to transmit ER data
"PeriodicTime"	Periodic Time to transmit ER data
"onTime"	Time at which ER data should be transmitted
"afterOn"	After a time at which ER data should be transmitted
"beforeOn"	Before a time at which ER data should be transmitted
"beginElapse"	Reference time when elapsed time for transmitting the ER data begins. If there is no beginElapse, the reference

	time is Event occurrence time
"endElapse"	End time of elapsed time by which delivery of the Event Report data is ended
"sTime"	Specific time of a day on which an Event occurs, the specific time at which delivery of an Event Report data for the Event starts
"sDuration"	Duration after specific time of a day on which an Event occurs, the specific time at which delivery of an Event Report data for the Event starts
"eTime"	Specific time of a day on which an Event occurs, the specific time at which delivery of an Event Report data for the Event ends
"endDuration"	Duration after specific time of a day on which an Event occurs, the specific time at which delivery of an Event Report data for the Event ends

56. The Event Reporting system as recited in claim 55, wherein based on schema of eXtensible Markup Language (XML), syntax of the To Whom information is defined as:

5

(Table 3)
```
<xsd:complexType name="Recipient">
        <xsd:sequence minOccurs="1"
maxOccurs="unbounded">
                <xsd:element name="peer"
type="xsd:string"/>
                <xsd:element name="reportPolicy">
                    <xsd:simpleType>
                        <xsd:restriction
base="xsd:NMTOKEN">
```

10

15

```
                                    <xsd:pattern
value="required"/>
                                    <xsd:pattern
value="optional"/>
 5                              </xsd:restriction>
                          </xsd:simpleType>
                      </xsd:element>
                  </xsd:sequence>
              </xsd:complexType>
10        <xsd:element name="recipient" type="Recipient"/>
```

(Table 4)

Name	Definition
"Recipient"	Recipient
"peer"	Peer generating Event Report
"reportPolicy"	Event Report policy. If the value is "required", the peer should transmit the ER data, and if the value is "optional", the Event Report Request message is denied and the ER data can not be transmitted.

57. The Event Reporting system as recited in claim 56,
15 wherein the Event Report data includes:

ER Descriptor describing contents and formats of the Event Report data;

Source Descriptor describing information on a source generating the Event Report data;

20   ER Report data describing reportable information corresponding to items requested by the Event Report Request data; and

Additional Action Descriptor describing additional actions related to generation, transmission and reception
25 of the Event Report data corresponding to the Event Report Request data.

58. The Event Reporting system as recited in claim 57, wherein the ER Descriptor includes:

identification (ID) of the Event Report data; and

description information describing attributes of the Event Report data.

59. The Event Reporting system as recited in claim 58, wherein the Source Descriptor includes:

ER Peer ID describing identification (ID) of the peer who generates the Event Report data at the first; and

Original ERR describing information on the Event Report Request data requesting to generate the Event Report data.

60. The Event Reporting system as recited in claim 59, wherein the Additional Action Descriptor includes:

ERR describing another Event Report Request data requesting an operation, e.g., an acknowledgement, forwarding or merging of the Event Report data; and

ER describing another Event Report data to be linked to the Event Report data.

61. The Event Reporting system as recited in claim 60, wherein the description information includes:

Format describing a format of data used for generating the Event Report data;

Encryption describing an encryption algorithm for encrypting the Event Report data;

Compression describing a compression algorithm for compressing the Event Report data;

Access Right describing an access right of the Event Report data;

Authentication describing an authentication algorithm for authenticating the Event Report data;

History describing a history of changes or modification of the Event Report data;

Priority Level describing the priority level to the Event Report data, wherein the priority level is used by the recipient to handle Event Report data; and

Time Stamp describing a time on which the Event Report data is generated.

62. The Event Reporting system as recited in claim 61, wherein the ER Report Data embeds or refers reportable information specified in the Event Report Request data.

63. The Event Reporting system as recited in claim 62, wherein the Original ERR embeds or refers the Event Report Request data requesting to generate the Event Report data.

64. The Event Reporting system as recited in claim 63, wherein the ERR embeds or refers another Event Report Request data related to the Event Report data.

65. The Event Reporting system as recited in claim 64, wherein the ER embeds or refers another Event Report data related to the Event Report data.

66. The Event Reporting system request data as recited in claim 48, wherein the Event Report Request data includes information as:

General Element	Specific Element		
Condition Descriptor	Time		
	Event	DI Related Operation	
		Peer Related Operation	
ERR Descriptor	Description	Time Stamp	
		Life Time	
		History	
		Priority Level	

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		ID	
		Access Right	
ER Descriptor	ER Data Descriptor	ER ID	
		Report Data	Peer Data
			User Data
	ERR		
Delivery Descriptor	Format		
	Encryption		
	Access Right		
	Authentication		
	Delivery Time		
	Protocol		
	Compression		
To Whom	Peer IDs		
	User IDs		

67. The Event Reporting system data as recited in claim 48, wherein the Event Report Request data includes information as:

General Element	Specific Element		
Condition Descriptor	Time		
	DI Related Operation		
	Peer Related Operation		
ERR Descriptor	Description	Time Stamp	
		Life Time	
		History	
		Priority Level	
	ID		
	Access Right		
ER Descriptor	ER Data Descriptor	ER ID	
		Report Data	
		Access Right	

		Format
		ERR
Delivery Descriptor	To Whom	Peer IDs
		User IDs
	Delivery Time	
	How	Encryption
		Authentication
		Protocol
		Compression

68. The Event· Reporting system data as recited in claim 67, wherein the Event Report data includes information as:

General Element	Specific Element
ER Descriptor	ID
	Format
	Encryption
	Access Right
	Authenticate
	Compression
	History
	Priority Level
	Time Stamp
Source Descriptor	ER Peer ID
	Original ERR
ER Report Data	
Additional Action Descriptor	ERR
	ER

69. An apparatus for requesting to report an Event and processing an Event Report Request data in order to report an Event occurred in accordance with use of a

5   digital item, the apparatus comprising:

Event Report Request generation means for generating the Event Report Request data;

Event Report Request transmission means for transmitting the Event Report Request data;

10   Event Report Request receiving means for receiving an Event Report Request data;

Event Report Request analysis means for the Event Report Request data received in the Event Report Request receiving means; and

15   Event occurrence monitoring means for monitoring whether or not an Event occurs.

70. An apparatus for processing an Event Report data in order to report an Event occurred in accordance with use

20   of a digital item, the apparatus comprising:

Event Report generation means for generating the Event Report data;

Event Report transmission means for transmitting the Event Report data;

25   Event Report receiving means for receiving an Event Report data; and

Event Report Request analysis means for the Event Report data received in the Event Report receiving means.

30   71. A method for processing an Event Report Request data in order to report an Event occurred in accordance with use of a digital item, the method system comprising the steps of:

a) generating and delivering an Event Report Request

35   data requesting to report an Event, receiving an Event

Report   request data from an outside and analyzing the
Event Report Request data received from the outside, and
monitoring whether or not the Event specified in the Event
Report Report Request data received from the outside; and

5   b) Event Report processing means for generating and
delivering an Event Report data reporting the Event
specified in the Event Report Request data, analyzing an
Event Report data received from an outside, and delivering
an analysis result.

10

72. The method as recited in claim 71, wherein the
step a) includes the steps of:
        generating the Event Report Request data;
        transmitting the Event Report Request data;

15   receiving an Event Report Request data from the
outside;
        analyzing the Event Report Request data received from
the outside; and
        monitoring whether or not the Event specified in the

20 Event Report Request data received from the outside occurs.

73. The method as recited in claim 72, wherein the
step b) includes the steps of:
        generating the Event Report data;

25   transmitting the Event Report data;
        receiving an Event Report data received from the
outside;
        analyzing the Event Report data received from the
outside.

30

74. The method as recited in claim 73, wherein the
Event Report Request data includes Delivery Time
information describing time for transmitting the Event
Report data,

35   wherein the Delivery Time information includes:

53

a specific time;

an elapsed time; and

a periodic time.

5   75. The method as recited in claim 74, wherein the specific time includes information requesting to transmit the Event Report data at least one of on a first time, after the first time, before a second time and between the first time and the second time.

10

76. The method as recited in claim 75, wherein the elapsed time includes information requesting to transmit the Event Report data at least one of after on, before after a third time, before a fourth time and between the

15   third time and the fourth time.

77. The method as recited in claim 76, further comprising Time information describing time on which the Event occurs,

20   wherein the Time information includes:

a specific time;

an elapsed time; and

a periodic time.

25   78. The method as recited in claim 77, wherein the specific time includes information on which the Event occurs at least one of on a first time, after the first time, before a second time and between the first time and the second time.

30

79. The method as recited in claim 78, wherein the elapsed time includes information on which the Event occurs at least one of after on, before after a third time, before a fourth time and between the third time and the fourth

35   time.

80. The method as recited in claim 79, wherein the Event Report Request data further includes To Whom information,

5   wherein the To Whom information includes:

a mandatory recipient to whom the Event Report data is transmitted in mandatory; and

an optional recipient to whom the Event Report data is transmitted in optional.

10

81. The Event Reporting method as recited in claim 80, wherein based on schema of eXtensible Markup Language (XML), syntax of the Delivery time information is defined as:

15   (Table 1)
```
<xsd:complexType name="DeliveryTime">
      <xsd:choice minOccurs="0">
            <xsd:element name="specificTime"
type="SpecificTime"/>
            <xsd:element name="elapsedTime"
type="ElapsedTime"/>
            <xsd:element name="periodicTime"
type="PeriodicTime"/>
      </xsd:choice>
</xsd:complexType>
<xsd:complexType name="SpecificTime">
      <xsd:choice>
            <xsd:element name="onTime"
type="xsd:dateTime"/>
            <xsd:sequence>
                  <xsd:element name="afterOn"
type="xsd:dateTime" minOccurs="0"/>
                  <xsd:element name="beforeOn"
type="xsd:dateTime" minOccurs="0"/>
            </xsd:sequence>
```

```
          </xsd:choice>
          </xsd:complexType>
          <xsd:complexType name="ElapsedTime">
                <xsd:sequence>
5                         <xsd:element name="beginElapse"
    type="BeginElapse" minOccurs="0"/>
                          <xsd:element name="endElapse"
    type="EndElapse" minOccurs="0"/>
                </xsd:sequence>
10        </xsd:complexType>
          <xsd:complexType name="BeginElapse">
                <xsd:choice>
                          <xsd:element name="sTime"
    type="xsd:time"/>
15                        <xsd:element name="sDuration"
    type="xsd:duration"/>
                </xsd:choice>
          </xsd:complexType>
          <xsd:complexType name="EndElapse">
20                <xsd:choice>
                          <xsd:element name="eTime"
    type="xsd:time"/>
                          <xsd:element name="eDuration"
    type="xsd:duration"/>
25                </xsd:choice>
          </xsd:complexType>
          <xsd:complexType name="PeriodicTime">
                <xsd:sequence>
                          <xsd:element name="start"
30  type="xsd:dateTime" minOccurs="0"/>
                          <xsd:element name="period"
    type="xsd:duration"/>
                          <xsd:element name="phase"
    type="xsd:duration" minOccurs="0"/>
35                        <xsd:element name="duration"
```

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```
type="xsd:duration"/>
                <xsd:element name="periodCount"
type="xsd:duration"/>
        </xsd:sequence>
    </xsd:complexType>

    <xsd:element name="deliveryTime"
type="DeliveryTime"/>
```

5

10   (Table 2)

Name	Definition
"DeliveryTime"	Delivery Time Information
"SpecificTime"	Specific time to transmit ER data
"ElapsedTime"	Elapsed time to transmit ER data
"PeriodicTime"	Periodic Time to transmit ER data
"onTime"	Time at which ER data should be transmitted
"afterOn"	After a time at which ER data should be transmitted
"beforeOn"	Before a time at which ER data should be transmitted
"beginElapse"	Reference time when elapsed time for transmitting the ER data begins. If there is no beginElapse, the reference time is Event occurrence time
"endElapse"	End time of elapsed time by which delivery of the Event Report data is ended
"sTime"	Specific time of a day on which an Event occurs, the specific time at which delivery of an Event Report data for the Event starts
"sDuration"	Duration after specific time of a day on which an Event occurs, the specific

	time at which delivery of an Event Report data for the Event starts
"eTime"	Specific time of a day on which an Event occurs, the specific time at which delivery of an Event Report data for the Event ends
"endDuration"	Duration after specific time of a day on which an Event occurs, the specific time at which delivery of an Event Report data for the Event ends

82. The method as recited in claim 81, wherein based on schema of eXtensible Markup Language (XML), syntax of the To Whom information is defined as:

5

(Table 3)
```
<xsd:complexType name="Recipient">
        <xsd:sequence minOccurs="1"
maxOccurs="unbounded">
                <xsd:element name="peer"
type="xsd:string"/>
                <xsd:element name="reportPolicy">
                    <xsd:simpleType>
                        <xsd:restriction
base="xsd:NMTOKEN">
                            <xsd:pattern
value="required"/>
                            <xsd:pattern
value="optional"/>
                        </xsd:restriction>
                    </xsd:simpleType>
                </xsd:element>
        </xsd:sequence>
    </xsd:complexType>
    <xsd:element name="recipient" type="Recipient"/>
```

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(Table 4)

Name	Definition
"Recipient"	Recipient
"peer"	Peer generating Event Report
"reportPolicy"	Event Report policy. If the value is "required", the peer should transmit the ER data, and if the value is "optional", the Event Report Request message is denied and the ER data can not be transmitted.

83. The method as recited in claim 82, wherein the
5   Event Report data includes:

ER Descriptor describing contents and formats of the
Event Report data;

Source Descriptor describing information on a source
generating the Event Report data;

10   ER Report data describing reportable information
corresponding to items requested by the Event Report
Request data; and

Additional Action Descriptor describing additional
actions related to generation, transmission and reception

15 of the Event Report data corresponding to the Event Report
Request data.

84. The method as recited in claim 83, wherein the ER
Descriptor includes:

20   identification (ID) of the Event Report data; and

description information describing attributes of the
Event Report data.

85. The method as recited in claim 84, wherein the

25 Source Descriptor includes:

ER Peer ID describing identification (ID) of the peer

who generates the Event Report data at the first; and

Original ERR describing information on the Event Report Request data requesting to generate the Event Report data.

5

86. The method as recited in claim 85, wherein the Additional Action Descriptor includes:

ERR describing another Event Report Request data requesting an operation, e.g., an acknowledgement,
10 forwarding or merging of the Event Report data; and

ER describing another Event Report data to be linked to the Event Report data.

87. The method as recited in claim 86, wherein the
15 description information includes:

Format describing a format of data used for generating the Event Report data;

Encryption describing an encryption algorithm for encrypting the Event Report data;
20   Compression describing a compression algorithm for compressing the Event Report data;

Access Right describing an access right of the Event Report data;

Authentication describing an authentication algorithm
25 for authenticating the Event Report data;

History describing a history of changes or modification of the Event Report data;

Priority Level describing the priority level to the Event Report data, wherein the priority level is used by
30 the recipient to handle Event Report data; and

Time Stamp describing a time on which the Event Report data is generated.

88. The method as recited in claim 73, wherein the
35 Event Report Request data includes information as:

General Element	Specific Element		
Condition Descriptor	Time		
	Event	DI Related Operation	
		Peer Related Operation	
ERR Descriptor	Description	Time Stamp	
		Life Time	
		History	
		Priority Level	
	ID		
	Access Right		
ER Descriptor	ER Data Descriptor	ER ID	
		Report Data	Peer Data
			User Data
	ERR		
Delivery Descriptor	Format		
	Encryption		
	Access Right		
	Authentication		
	Delivery Time		
	Protocol		
	Compression		
To Whom	Peer IDs		
	User IDs		

89. The method as recited in claim 73, wherein the Event Report Request data includes information as:

General Element	Specific Element	
Condition Descriptor	Time	
	DI Related Operation	
	Peer Related Operation	
ERR Descriptor	Description	Time Stamp

		Life Time
		History
		Priority Level
	ID	
	Access Right	
ER Descriptor	ER Data Descriptor	ER ID
		Report Data
		Access Right
		Format
	ERR	
Delivery Descriptor	To Whom	Peer IDs
		User IDs
	Delivery Time	
	How	Encryption
		Authentication
		Protocol
		Compression

90. The method as recited in claim 89, wherein the Event Report data includes information as:

General Element	Specific Element
ER Descriptor	ID
	Format
	Encryption
	Access Right
	Authenticate
	Compression
	History
	Priority Level

	Time Stamp
Source Descriptor	ER Peer ID
	Original ERR
ER Report Data	
Additional Action Descriptor	ERR
	ER

91. A method for requesting to report an Event and processing an Event Report Request data in order to report an Event occurred in accordance with use of a digital item,
5   the method comprising steps of:

a) generating and delivering the Event Report Request data; and

b) receiving an Event Report Request data from an outside, analyzing the Event Report Request data received
10   from the outside and monitoring whether or not an Event specified in the Event Report Request data received from the outside occurs.

92. The method as recited in claim 91, wherein the
15   Event Report Request data includes Delivery Time information describing time for transmitting the Event Report data,

wherein the Delivery Time information includes:

a specific time;
20   an elapsed time; and

a periodic time.

93. The Event Reporting method as recited in claim 92, wherein based on schema of eXtensible Markup Language (XML),
25   syntax of the Delivery time information is defined as:

(Table 1)
<xsd:complexType name="DeliveryTime">
        <xsd:choice minOccurs="0">

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```
                        <xsd:element name="specificTime"
    type="SpecificTime"/>
                        <xsd:element name="elapsedTime"
    type="ElapsedTime"/>
5                       <xsd:element name="periodicTime"
    type="PeriodicTime"/>
                </xsd:choice>
        </xsd:complexType>
        <xsd:complexType name="SpecificTime">
10              <xsd:choice>
                        <xsd:element name="onTime"
    type="xsd:dateTime"/>
                        <xsd:sequence>
                                <xsd:element name="afterOn"
15  type="xsd:dateTime" minOccurs="0"/>
                                <xsd:element name="beforeOn"
    type="xsd:dateTime" minOccurs="0"/>
                        </xsd:sequence>
                </xsd:choice>
20      </xsd:complexType>
        <xsd:complexType name="ElapsedTime">
                <xsd:sequence>
                        <xsd:element name="beginElapse"
    type="BeginElapse" minOccurs="0"/>
25                      <xsd:element name="endElapse"
    type="EndElapse" minOccurs="0"/>
                </xsd:sequence>
        </xsd:complexType>
        <xsd:complexType name="BeginElapse">
30              <xsd:choice>
                        <xsd:element name="sTime"
    type="xsd:time"/>
                        <xsd:element name="sDuration"
    type="xsd:duration"/>
35              </xsd:choice>
```

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```
            </xsd:complexType>
            <xsd:complexType name="EndElapse">
                    <xsd:choice>
                            <xsd:element name="eTime"
 5   type="xsd:time"/>
                            <xsd:element name="eDuration"
     type="xsd:duration"/>
                    </xsd:choice>
            </xsd:complexType>
10          <xsd:complexType name="PeriodicTime">
                    <xsd:sequence>
                            <xsd:element name="start"
     type="xsd:dateTime" minOccurs="0"/>
                            <xsd:element name="period"
15   type="xsd:duration"/>
                            <xsd:element name="phase"
     type="xsd:duration" minOccurs="0"/>
                            <xsd:element name="duration"
     type="xsd:duration"/>
20                          <xsd:element name="periodCount"
     type="xsd:duration"/>
                    </xsd:sequence>
            </xsd:complexType>

25          <xsd:element name="deliveryTime"
     type="DeliveryTime"/>
```

(Table 2)

Name	Definition
"DeliveryTime"	Delivery Time Information
"SpecificTime"	Specific time to transmit ER data
"ElapsedTime"	Elapsed time to transmit ER data
"PeriodicTime"	Periodic Time to transmit ER data
"onTime"	Time at which ER data should be

	transmitted
"afterOn"	After a time at which ER data should be transmitted
"beforeOn"	Before a time at which ER data should be transmitted
"beginElapse"	Reference time when elapsed time for transmitting the ER data begins. If there is no beginElapse, the reference time is Event occurrence time
"endElapse"	End time of elapsed time by which delivery of the Event Report data is ended
"sTime"	Specific time of a day on which an Event occurs, the specific time at which delivery of an Event Report data for the Event starts
"sDuration"	Duration after specific time of a day on which an Event occurs, the specific time at which delivery of an Event Report data for the Event starts
"eTime"	Specific time of a day on which an Event occurs, the specific time at which delivery of an Event Report data for the Event ends
"endDuration"	Duration after specific time of a day on which an Event occurs, the specific time at which delivery of an Event Report data for the Event ends

94. The method as recited in claim 93, wherein the Event Report data includes:

ER Descriptor describing identification and characteristics of the Event Report data;

Source Descriptor describing a source generating the Event Report data;

66

ER Report Data describing reportable information corresponding to items requested by the EVENT REPORT REQUEST data; and

Additional Action Descriptor describing additional
5   actions related to generation, transmission and reception of the Event Report data corresponding to the Event Report Request data

95. The method as recited in claim 92, wherein the
10 Event Report Request data includes information as:

General Element	Specific Element		
Condition Descriptor	Time		
	Event	DI Related Operation	
		Peer Related Operation	
ERR Descriptor	Description	Time Stamp	
		Life Time	
		History	
		Priority Level	
	ID		
	Access Right		
ER Descriptor	ER Data Descriptor	ER ID	
		Report Data .	Peer Data
			User Data
	ERR		
Delivery Descriptor	Format		
	Encryption		
	Access Right		
	Authentication		
	Delivery Time		
	Protocol		
	Compression		
To Whom	Peer IDs		
	User IDs		

96. The method as recited in claim 92, wherein the Event Report Request data includes information as:

General Element	Specific Element		
Condition Descriptor	Time		
	DI Related Operation		
	Peer Related Operation		
ERR Descriptor	Description	Time Stamp	
		Life Time	
		History	
		Priority Level	
	ID		
	Access Right		
ER Descriptor	ER Data Descriptor	ER ID	
		Report Data	
		Access Right	
		Format	
	ERR		
Delivery Descriptor	To Whom	Peer IDs	
		User IDs	
	Delivery Time		
	How		Encryption
			Authentication
			Protocol
			Compression

97. The method as recited in claim 96, wherein the Event Report data includes information as:

General Element	Specific Element
ER Descriptor	ID
	Format
	Encryption

	Access Right
	Authenticate
	Compression
	History
	Priority Level
	Time Stamp
Source Descriptor	ER Peer ID
	Original ERR
ER Report Data	
Additional Action Descriptor	ERR
	ER

98. A method for processing an Event Report data in order to report an Event occurred in accordance with use of a digital item, the method comprising the steps of:

5   a) generating and delivering an Event Report data to report the Event specified in an Event Report Request data; and

        b) analyzing and processing an Event Report data received from an outside.

10

99. The method as recited in claim 98, wherein the Event Report Request data includes a specific time, an elapsed time and a periodic time on which the Event Report data is delivered.

15

100. The method as recited in claim 99, wherein based on schema of eXtensible Markup Language (XML), syntax of the Delivery time information is defined as:

20   (Table 1)
        <xsd:complexType name="DeliveryTime">
            <xsd:choice minOccurs="0">
                <xsd:element name="specificTime"
type="SpecificTime"/>

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```
                              <xsd:element name="elapsedTime"
    type="ElapsedTime"/>
                              <xsd:element name="periodicTime"
    type="PeriodicTime"/>
5               </xsd:choice>
            </xsd:complexType>
            <xsd:complexType name="SpecificTime">
                <xsd:choice>
                        <xsd:element name="onTime"
10  type="xsd:dateTime"/>
                        <xsd:sequence>
                                <xsd:element name="afterOn"
    type="xsd:dateTime" minOccurs="0"/>
                                <xsd:element name="beforeOn"
15  type="xsd:dateTime" minOccurs="0"/>
                        </xsd:sequence>
                </xsd:choice>
            </xsd:complexType>
            <xsd:complexType name="ElapsedTime">
20              <xsd:sequence>
                        <xsd:element name="beginElapse"
    type="BeginElapse" minOccurs="0"/>
                        <xsd:element name="endElapse"
    type="EndElapse" minOccurs="0"/>
25              </xsd:sequence>
            </xsd:complexType>
            <xsd:complexType name="BeginElapse">
                <xsd:choice>
                        <xsd:element name="sTime"
30  type="xsd:time"/>
                        <xsd:element name="sDuration"
    type="xsd:duration"/>
                </xsd:choice>
            </xsd:complexType>
35          <xsd:complexType name="EndElapse">
```

```
            <xsd:choice>
                    <xsd:element name="eTime"
    type="xsd:time"/>
                    <xsd:element name="eDuration"
5   type="xsd:duration"/>
            </xsd:choice>
        </xsd:complexType>
        <xsd:complexType name="PeriodicTime">
            <xsd:sequence>
10                  <xsd:element name="start"
    type="xsd:dateTime" minOccurs="0"/>
                    <xsd:element name="period"
    type="xsd:duration"/>
                    <xsd:element name="phase"
15  type="xsd:duration" minOccurs="0"/>
                    <xsd:element name="duration"
    type="xsd:duration"/>
                    <xsd:element name="periodCount"
    type="xsd:duration"/>
20          </xsd:sequence>
        </xsd:complexType>

        <xsd:element name="deliveryTime"
    type="DeliveryTime"/>
25
```

(Table 2)

Name	Definition
"DeliveryTime"	Delivery Time Information
"SpecificTime"	Specific time to transmit ER data
"ElapsedTime"	Elapsed time to transmit ER data
"PeriodicTime"	Periodic Time to transmit ER data
"onTime"	Time at which ER data should be transmitted
"afterOn"	After a time at which ER data

	should be transmitted
"beforeOn"	Before a time at which ER data should be transmitted
"beginElapse"	Reference time when elapsed time for transmitting the ER data begins. If there is no beginElapse, the reference time is Event occurrence time
"endElapse"	End time of elapsed time by which delivery of the Event Report data is ended
"sTime"	Specific time of a day on which an Event occurs, the specific time at which delivery of an Event Report data for the Event starts
"sDuration"	Duration after specific time of a day on which an Event occurs, the specific time at which delivery of an Event Report data for the Event starts
"eTime"	Specific time of a day on which an Event occurs, the specific time at which delivery of an Event Report data for the Event ends
"endDuration"	Duration after specific time of a day on which an Event occurs, the specific time at which delivery of an Event Report data for the Event ends

101. The method as recited in claim 100, wherein the Event Report data includes:

ER Descriptor describing identification and
5   characteristics of the Event Report data;

Source Descriptor describing a source generating the

Event Report data;

     ER Report Data describing reportable information corresponding to items requested by the Event Report Request data; and

     Additional Action Descriptor describing additional actions related to generation, transmission and reception of the Event Report data corresponding to the Event Report Request data

     102. The method as recited in claim 99, wherein the Event Report Request data includes information as:

General Element	Specific Element		
Condition Descriptor	Time		
	Event	DI Related Operation	
		Peer Related Operation	
ERR Descriptor	Description	Time Stamp	
		Life Time	
		History	
		Priority Level	
	ID		
	Access Right		
ER Descriptor	ER Data Descriptor	ER ID	
		Report Data	Peer Data
			User Data
	ERR		
Delivery Descriptor	Format		
	Encryption		
	Access Right		
	Authentication		
	Delivery Time		
	Protocol		
	Compression		
To Whom	Peer IDs		
	User IDs		

103. The method as recited in claim 99, wherein the Event Report Request data includes information as:

General Element	Specific Element		
Condition Descriptor	Time		
	DI Related Operation		
	Peer Related Operation		
ERR Descriptor	Description	Time Stamp	
		Life Time	
		History	
		Priority Level	
	ID		
	Access Right		
ER Descriptor	ER Data Descriptor	ER ID	
		Report Data	
		Access Right	
		Format	
	ERR		
Delivery Descriptor	To Whom	Peer IDs	
		User IDs	
	Delivery Time		
	How	Encryption	
		Authentication	
		Protocol	
		Compression	

104. The Event Report data processing method as recited in claim 103, wherein the Event Report data includes information as:

General Element	Specific Element
ER Descriptor	ID
	Format

	Encryption
	Access Right
	Authenticate
	Compression
	History
	Priority Level
	Time Stamp
Source Descriptor	ER Peer ID
	Original ERR
ER Report Data	
Additional Action Descriptor	ERR
	ER

105. A computer readable recording media storing instructions for executing a method for requesting to report an Event and processing an Event Report Request data
5   in order to report an Event occurred in accordance with use of a digital item, the method comprising steps of:

a) generating and delivering the Event Report Request data; and

b) receiving an Event Report Request data from an
10 outside, analyzing the Event Report Request data received from the outside and monitoring whether or not an Event specified in the Event Report Request data received from the outside occurs.